SEQUENCE LISTING

<110> Maquat, Lynne E.

<120> NONSENSE-MEDIATED MRNA DECAY

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<140> 10/525,273
<141> 2005-02-22

<150> PCT/US03/26166
<151> 2003-08-21

<150> 60/405,602
<151> 2002-08-22

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<400> 37

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Lys Glu Leu Lys Glu Ala Arg Pro Arg Lys Asp Asn Arg Arg Pro Asp
        35                  40                  45
Leu Glu Ile Tyr Lys Pro Gly Leu Ser Arg Leu Arg Asn Lys Pro Lys
    50                  55                  60
Ile Lys Glu Pro Pro Gly Ser Glu Glu Phe Lys Asp Glu Ile Val Asn
65                  70                  75                  80
Asp Arg Asp Cys Ser Ala Val Glu Asn Gly Thr Gln Pro Val Lys Asp
                85                  90                  95
Val Cys Lys Glu Leu Asn Asn Gln Glu Gln Asn Gly Pro Ile Asp Pro
            100                 105                 110
Glu Asn Asn Arg Gly Gln Glu Ser Phe Pro Arg Thr Ala Gly Gln Glu
        115                 120                 125
Asp Arg Ser Leu Lys Ile Ile Lys Arg Thr Lys Lys Pro Asp Leu Gln
    130                 135                 140
Ile Tyr Gln Pro Gly Arg Arg Leu Gln Thr Val Ser Lys Glu Ser Ala
145                 150                 155                 160
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Ser Arg Val Glu Glu Glu Glu Val Leu Asn Gln Val Glu Gln Leu Arg
                165                 170                 175
Val Glu Glu Asp Glu Cys Arg Gly Asn Val Ala Lys Glu Glu Val Ala
            180                 185                 190
Asn Lys Pro Asp Arg Ala Glu Ile Glu Lys Ser Pro Gly Gly Gly Arg
        195                 200                 205
Val Gly Ala Ala Lys Gly Glu Lys Gly Lys Arg Met Gly Lys Gly Glu
    210                 215                 220
Gly Val Arg Glu Thr His Asp Asp Pro Ala Arg Gly Arg Pro Gly Ser
225                 230                 235                 240
Ala Lys Arg Tyr Ser Arg Ser Asp Lys Arg Arg Asn Arg Tyr Arg Thr
                245                 250                 255
Arg Ser Thr Ser Ser Ala Gly Ser Asn Asn Ser Ala Glu Gly Ala Gly
            260                 265                 270
Leu Thr Asp Asn Gly Cys Arg Arg Arg Arg Gln Asp Arg Thr Lys Glu
        275                 280                 285
Arg Pro Pro Leu Lys Lys Gln Val Ser Val Ser Ser Thr Asp Ser Leu
    290                 295                 300
Asp Glu Asp Arg Ile Asp Glu Pro Asp Gly Leu Gly Pro Arg Arg Ser
305                 310                 315                 320
Ser Glu Arg Lys Arg His Leu Glu Arg Asn Trp Ser Gly Arg Gly Glu
                325                 330                 335
Gly Glu Gln Lys Thr Ser Ala Lys Glu Tyr Arg Gly Thr Leu Arg Val
            340                 345                 350
Thr Phe Asp Ala Glu Ala Met Asn Lys Glu Ser Pro Met Val Arg Ser
        355                 360                 365
Ala Arg Asp Asp Met Asp Arg Gly Lys Pro Asp Lys Gly Leu Ser Ser
    370                 375                 380
Gly Gly Lys Gly Ser Glu Lys Gln Glu Ser Lys Asn Pro Lys Gln Glu
385                 390                 395                 400
Leu Arg Gly Arg Gly Arg Gly Ile Leu Ile Leu Pro Ala His Thr Thr
                405                 410                 415
Leu Ser Val Asn Ser Ala Gly Ser Pro Glu Ser Ala Pro Leu Gly Pro
            420                 425                 430
Arg Leu Leu Phe Gly Ser Gly Ser Lys Gly Ser Arg Ser Trp Gly Arg
        435                 440                 445
Gly Gly Thr Thr Arg Arg Leu Trp Asp Pro Asn Asn Pro Asp Gln Lys
    450                 455                 460
Pro Ala Leu Lys Thr Gln Thr Pro Gln Leu His Phe Leu Asp Thr Asp
465                 470                 475                 480
Asp Glu Val Ser Pro Thr Ser Trp Gly Asp Ser Arg Gln Ala Gln Ala
                485                 490                 495
Ser Tyr Tyr Lys Phe Gln Asn Ser Asp Asn Pro Tyr Tyr Tyr Pro Arg
            500                 505                 510
Thr Pro Gly Pro Ala Ser Gln Tyr Pro Tyr Thr Gly Tyr Asn Pro Leu
        515                 520                 525
Gln Tyr Pro Val Gly Pro Thr Asn Gly Val Tyr Pro Gly Pro Tyr Tyr
    530                 535                 540
Pro Gly Tyr Pro Thr Pro Ser Gly Gln Tyr Val Cys Ser Pro Leu Pro
545                 550                 555                 560
Thr Ser Thr Met Ser Pro Glu Glu Val Glu Gln His Met Arg Asn Leu
                565                 570                 575
Gln Gln Gln Glu Leu His Arg Leu Leu Arg Val Ala Asp Asn Gln Glu
            580                 585                 590
Leu Gln Leu Ser Asn Leu Leu Ser Arg Asp Arg Ile Ser Pro Glu Gly
        595                 600                 605
Leu Glu Lys Met Ala Gln Leu Arg Ala Glu Leu Leu Gln Leu Tyr Glu
    610                 615                 620
Arg Cys Ile Leu Leu Asp Ile Glu Phe Ser Asp Asn Gln Asn Val Asp
625                 630                 635                 640
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Gln Ile Leu Trp Lys Asn Ala Phe Tyr Gln Val Ile Glu Lys Phe Arg
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Gln Leu Val Lys Asp Pro Asn Val Glu Asn Pro Glu Gln Ile Arg Asn
            660                 665                 670
Arg Leu Leu Glu Leu Leu Asp Glu Gly Ser Asp Phe Phe Asp Ser Leu
        675                 680                 685
Leu Gln Lys Leu Gln Val Thr Tyr Lys Phe Lys Leu Glu Asp Tyr Met
    690                 695                 700
Asp Gly Leu Ala Ile Arg Ser Lys Pro Leu Arg Lys Thr Val Lys Tyr
705                 710                 715                 720
Ala Leu Ile Ser Ala Gln Arg Cys Met Ile Cys Gln Gly Asp Ile Ala
                725                 730                 735
Arg Tyr Arg Glu Gln Ala Ser Asp Thr Ala Asn Tyr Gly Lys Ala Arg
            740                 745                 750
Ser Trp Tyr Leu Lys Ala Gln His Ile Ala Pro Lys Asn Gly Arg Pro
        755                 760                 765
Tyr Asn Gln Leu Ala Leu Leu Ala Val Tyr Thr Arg Arg Lys Leu Asp
    770                 775                 780
Ala Val Tyr Tyr Tyr Met Arg Ser Leu Ala Ala Ser Asn Pro Ile Leu
785                 790                 795                 800
Thr Ala Lys Glu Ser Leu Met Ser Leu Phe Glu Glu Thr Lys Arg Lys
                805                 810                 815
Ala Glu Gln Met Glu Lys Lys Gln His Glu Glu Phe Asp Leu Ser Pro
            820                 825                 830
Asp Gln Trp Arg Lys Gly Lys Lys Ser Thr Phe Arg His Val Gly Asp
        835                 840                 845
Asp Thr Thr Arg Leu Glu Ile Trp Ile His Pro Ser His Pro Arg Ser
    850                 855                 860
Ser Gln Gly Thr Glu Ser Gly Lys Asp Ser Glu Gln Glu Asn Gly Leu
865                 870                 875                 880
Gly Ser Leu Ser Pro Ser Asp Leu Asn Lys Arg Phe Ile Leu Ser Phe
                885                 890                 895
Leu His Ala His Gly Lys Leu Phe Thr Arg Ile Gly Met Glu Thr Phe
            900                 905                 910
Pro Ala Val Ala Glu Lys Val Leu Lys Glu Phe Gln Val Leu Leu Gln
        915                 920                 925
His Ser Pro Ser Pro Ile Gly Ser Thr Arg Met Leu Gln Leu Met Thr
    930                 935                 940
Ile Asn Met Phe Ala Val His Asn Ser Gln Leu Lys Asp Cys Phe Ser
945                 950                 955                 960
Glu Glu Cys Arg Ser Val Ile Gln Glu Gln Ala Ala Ala Leu Gly Leu
                965                 970                 975
Ala Met Phe Ser Leu Leu Val Arg Arg Cys Thr Cys Leu Leu Lys Glu
            980                 985                 990
Ser Ala Lys Ala Gln Leu Ser Ser Pro Glu Asp Gln Asp Asp Gln Asp
        995                 1000                1005
Asp Ile Lys Val Ser Ser Phe Val Pro Asp Leu Lys Glu Leu Leu Pro
    1010                1015                1020
Ser Val Lys Val Trp Ser Asp Trp Met Leu Gly Tyr Pro Asp Thr Trp
1025                1030                1035                1040
Asn Pro Pro Pro Thr Ser Leu Asp Leu Pro Ser His Val Ala Val Asp
                1045                1050                1055
Val Trp Ser Thr Leu Ala Asp Phe Cys Asn Ile Leu Thr Ala Val Asn
            1060                1065                1070
Gln Ser Glu Val Pro Leu Tyr Lys Asp Pro Asp Asp Asp Leu Thr Leu
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Leu Ile Leu Glu Glu Asp Arg Leu Leu Ser Gly Phe Val Pro Leu Leu
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Ala Ala Pro Gln Asp Pro Cys Tyr Val Glu Lys Thr Ser Asp Lys Val
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Tyr Val Ser Val Ala Pro Val Pro Asp Thr Met Gly Lys Glu Met Gly
        1155                1160                1165
Ser Gln Glu Gly Thr Arg Leu Glu Asp Glu Glu Glu Asp Val Val Ile
    1170                1175                1180
Glu Asp Phe Glu Glu Asp Ser Glu Ala Glu Gly Ser Gly Gly Glu Asp
1185                1190                1195                1200
Asp Ile Arg Glu Leu Arg Ala Lys Lys Leu Ala Leu Ala Arg Lys Ile
                1205                1210                1215
Ala Glu Gln Gln Arg Arg Gln Glu Lys Ile Gln Ala Val Leu Glu Asp
            1220                1225                1230
His Ser Gln Met Arg Gln Met Glu Leu Glu Ile Arg Pro Leu Phe Leu
        1235                1240                1245
Val Pro Asp Thr Asn Gly Phe Ile Asp His Leu Ala Ser Leu Ala Arg
    1250                1255                1260
Leu Leu Glu Ser Arg Lys Tyr Ile Leu Val Val Pro Leu Ile Val Ile
1265                1270                1275                1280
Asn Glu Leu Asp Gly Leu Ala Lys Gly Gln Glu Thr Asp His Arg Ala
                1285                1290                1295
Gly Gly Tyr Ala Arg Val Val Gln Glu Lys Ala Arg Lys Ser Ile Glu

            1300                1305                1310
Phe Leu Glu Gln Arg Phe Glu Ser Arg Asp Ser Cys Leu Arg Ala Leu
        1315                1320                1325
Thr Ser Arg Gly Asn Glu Leu Glu Ser Ile Ala Phe Arg Ser Glu Asp
    1330                1335                1340
Ile Thr Gly Gln Leu Gly Asn Asn Asp Asp Leu Ile Leu Ser Cys Cys
1345                1350                1355                1360
Leu His Tyr Cys Lys Asp Lys Ala Lys Asp Phe Met Pro Ala Ser Lys
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Glu Glu Pro Ile Arg Leu Leu Arg Glu Val Val Leu Leu Thr Asp Asp
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Arg Asn Leu Arg Val Lys Ala Leu Thr Arg Asn Val Pro Val Arg Asp
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<220>
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taggggaaat gttgcgaagg aggaagttgc gaataaacca gacagggccg agatagaaaa     660
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